



Attorney's Docket No. 5308-156

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Ryu et al.

Group Art Unit: 2811

Serial No.: 09/911,995

Confirmation No.: 5240

Filed: July 24, 2001

Examiner: Gene Munson

For: SILICON CARBIDE POWER METAL-OXIDE SEMICONDUCTOR FIELD EFFECT  
TRANSISTORS HAVING A SHORTING CHANNEL AND METHODS OF  
FABRICATING SILICON CARBIDE METAL-OXIDE SEMICONDUCTOR FIELD  
EFFECT TRANSISTORS HAVING A SHORTING CHANNEL

Date: April 26, 2005]

Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Sir:

Attached is a list of documents on Form PTO-1449, together with a copy of any listed foreign patent document and/or non-patent literature. A copy of any listed U.S. patent and/or U.S. patent application publication is not provided herewith in accordance with the amendment by the U.S. Patent and Trademark Office to 37 C.F.R. § 1.98(a)(2)(ii) effective October 21, 2004. It is requested that these documents be considered by the Examiner and officially made of record in accordance with the provisions of 37 C.F.R. § 1.56 and Section 609 of the MPEP.

This Information Disclosure is submitted in accordance with 37 C.F.R. § 1.97(b)(4), before the mailing of a first action after the filing of a Request for Continued Examination under 37 C.F.R. § 1.114. Therefore, no fee is believed due. However, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-0220.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on April 26, 2005.



Traci A. Brown

APR 28 2005

<b>FORM PTO-1449</b> U.S. Department of Commerce Patent and Trademark Office <b>LIST OF DOCUMENTS CITED BY APPLICANT</b> (Use several sheets if necessary)				Attorney Docket Number: 5308-156			Serial No.: 09/911,995
				Applicants: Ryu et al.			
				Filing Date: July 24, 2001			Group: 2811
<b>U. S. PATENT DOCUMENTS</b>							
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
1		6,767,843	07/27/04	Lipkin et al.	438	758	
2		6,759,684	07/06/04	Fukuda et al.	257	77	
3		6,653,659	11/25/03	Ryu et al.	257	77	
4		6,551,865	04/22/03	Kumar et al.	438	137	
5		6,429,041	08/06/02	Ryu et al.	438	105	
6		6,303,508	10/16/01	Alok	438	705	
7		6,297,100	10/02/01	Kumar et al.	438	268	
8		6,180,958	01/30/01	Cooper, Jr.	257	77	
9		6,133,587	10/17/00	Takeuchi et al.	257	77	
10		6,025,233	02/15/00	Teresawa	438	270	
11		6,020,600	02/01/00	Miyajima et al.	257	76	
12		5,976,936	11/02/99	Miyajima et al.	438	268	
13		5,917,203	06/29/99	Bhatnagar et al.	257	139	
14		5,877,041	03/02/99	Fuller	438	105	
15		5,851,908	12/22/98	Harris et al.	438	520	
16		5,837,572	11/17/98	Gardner et al.	438	199	
17		5,814,859	09/29/98	Ghezzo et al.	257	335	
18		5,804,483	09/08/98	Harris	438	268	
19		5,734,180	03/31/98	Malhi	257	77	
20		5,710,059	01/20/98	Rottner	437	151	
21		5,629,531	05/13/97	Palmour	257	77	
22		5,510,281	04/23/96	Ghezzo et al.	437	41	
23		5,396,085	03/07/95	Baliga	257	77	
24		5,393,999	02/28/95	Malhi	257	289	
25		5,385,855	01/31/95	Brown et al.	437	41	
26		5,384,270	01/24/95	Ueno	437	40	

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Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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LIST OF DOCUMENTS CITED BY APPLICANT  (Use several sheets if necessary)							
				Applicants: Ryu et al.			
				Filing Date: July 24, 2001			Group: 2811
	27	5,348,895	09/20/94	Smayling et al.	437	54	
	28	5,270,554	12/14/93	Palmour	257	77	
	29	5,111,253	05/05/92	Korman et al.	257	341	
	30	4,811,065	03/07/89	Cogan	257	328	
	31	3,629,011	12/21/71	Tohi et al.	148	1.5	
	32	2004/0212011	10/28/04	Ryu	257	335	
	33	2004/0211980 A1	10/28/04	Ryu	257	200	
	34	2002/0030191	03/14/02	Das et al.	257	77	
	35	2002/0047125 A1	04/25/02	Fukuda et al.	257	77	
	36	2002/0102358	08/01/02	Das et al.	472	377	
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation Yes   No
	37	DE 19832329 A1	02/04/98	Germany			
	38	EP 1 204 145 A2	08/05/02	EPO			
	39	EP 1 058 317 A2	12/06/00	EPO			
	40	JP 01117363	05/10/89	Japan			Abstract
	41	JP 03034466	02/14/91	Japan			Abstract
	42	WO 97/98754	03/06/97	PCT			
	43	WO 98/02916	01/22/98	PCT			
	44	WO 01/78134 A1	10/18/01	PCT			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	45	Baliga, Power Semiconductor Devices, Chapter 7, PWS Publishing, 1996					
	46	Bhatnagar et al. "Comparison of 6H-SiC, 3C-SiC, and Si for Power Devices," <i>IEEE Transactions on Electron Devices</i> , Vol. 40, No. 3, March 1993, pp. 645-55.					
	47	Chung et al., "The Effect of Si:C Source Ratio on SiO <sub>2</sub> /SiC Interface State Density for Nitrogen Doped 4H and 6H-SiC," <i>Materials Science Forum</i> . (2000) Vols. 338-342, pp. 1097-1100.					
	48	Dahlquist et al. "A 2.8kV, Forward Drop JBS Diode with Low Leakage," <i>Materials Science Forum</i> , Vols. 338-342, (2000) pp. 1179-82.					

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			Applicants: Ryu et al.	
			Filing Date: July 24, 2001	Group: 2811
	49	Mondal et al. "An Integrated 500-V Power DSMOSFET/Antiparallel Rectifier Device with Improved Diode Reverse Recovery Characteristics," <i>IEEE Electron Device Letters</i> , Vol. 23, No. 9, September 2002, pp. 562-4.		
	50	Motorola Power MOSFET Transistor Databook, 4th edition. Motorola, INC., 1989, pp. 2-5-4 - 2-5-7.		
	51	Palmour et al. "SiC Device Technology: Remaining Issues," Diamond and Related Materials. vol. 6, 1997, pp. 1400-1404.		
	52	Rao et al. "P-N Junction Formation in 6H-SiC by Acceptor Implantation into N-Type Substrate," <i>Nuclear Instruments and Methods in Physics Research B</i> . vol. 106, 1995, pp. 333-338.		
	53	Rao et al. "Al and N Ion Implantations in 6H-SiC," <i>Silicon Carbide and Related Materials</i> . 1995 Conf, Kyoto, Japan. Published 1996.		
	54	Capano, M.A., et al., Ionization Energies and Electron Mobilities in Phosphorus-and Nitrogen-Implanted 4H-Silicon Carbide, <i>IEEE ICSCRM Conference 1999</i> , Research Triangle Park, North Carolina (Oct. 10-13, 1999).		
	55	Patel, R., et al., Phosphorus-Implanted High-Voltage N.sup.+ P 4H-SiC Junction Rectifiers, <i>Proceedings of 1998 International Symposium on Power Semiconductor Devices &amp; ICs</i> , pp. 387-390 (Kyoto).		
	56	Dastidar, Sujoyita, A Study of P-Type Activation in Silicon Carbide, Thesis (Purdue University, May 1998).		

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